Claims

1. A method for manufacturing a wire cord, said method comprising the steps of:

   crimping said wires between meshing toothed surfaces; and

   twisting together said plurality of crimped wires along a twisting path;

   characterised in that

   said crimping is carried out by passing a plurality of wires between meshing toothed surfaces located at the beginning of said twisting path.

2. The method as claimed in claim 1, wherein said twisting together starts between said meshing toothed surfaces.

3. The method as claimed in claim 1 or 2, wherein said wires are closely bundled before passing between said toothed surfaces.

4. The method as claimed in claim 3, wherein:

   at the entrance of said meshing toothed surfaces, said wires still lie closely side by side in one plane; and

   at the outlet of said meshing toothed surfaces, said wires are crossing one another.

5. A machine for manufacturing a cord, said machine comprising:

   a crimping means comprising crimping wheels with meshing toothed surfaces for crimping said wires; and

   a twisting means for twisting together said wires along a twisting path;

   characterised in that

   said crimping means comprises a pair of crimping wheels with meshing toothed surfaces that is located at the beginning of said twisting path; and

   said machine further comprises bundling means located upstream of said pair of crimping wheels for closely bundling a plurality of wires before pass-

ing between said toothed surfaces at the beginning of said twisting path.

6. The machine as claimed in claim 5, wherein said bundling means is a bundling die with an aperture, said aperture being dimensioned in such a way as to force said plurality of wires to lie closely side by side.

7. The machine as claimed in claim 5 or 6, wherein said bundling means is located between 30 mm to 60 mm from the point where said plurality of wires enter between said meshing toothed surfaces.

8. The machine as claimed in any one of claims 5 to 7, wherein in said meshing toothed surfaces two successive teeth with a tooth thickness t are separated by a gap with a gap width g, and said tooth thickness t and said gap width g satisfy following relation: $2t < g < 4t$.

9. The machine as claimed in claim 8, wherein said wires have a diameter D and said tooth thickness t and said diameter D satisfy following relation: $2D < t < 4D$.

10. The machine as claimed in any one of claims 5 to 9, wherein said wires have a diameter D between 0,2 and 1,0 mm.

11. The machine as claimed in any one of claims 5 to 10, wherein the distance between said crimping wheels in said pair is adjustable, so that the penetration of the teeth of one wheel into the gaps of the other wheel is adjustable.

12. The machine as claimed in any one of claims 5 to 11, wherein said twisting means comprises:

a rotor that can be rotated about a rotor rotation axis; and

a deflection pulley supported on said rotor, said deflection pulley forming the end of said twisting path, wherein the latter is substantially co-axial to said rotor rotation axis.

13. The machine as claimed in any one of claims 5 to 12, further comprising:

a support structure;

a rotor with a first rotor end and a second rotor end, said rotor being supported by said support structure in such a way as to be capable of rotating

about a rotor rotation axis;

a cradle supported between said first rotor end and said second rotor end, in such a way as to be capable of freely rocking about said rotor rotation axis, whereby said cradle remains immobile in rotation when said rotor is rotated;

a plurality of wire unwinding devices supported by said cradle;

guiding means on said cradle for guiding a plurality of wires from said unwinding devices towards said pair of crimping wheels, said pair of crimping wheels being mounted on said cradle in such a way as to be substantially aligned with said rotor rotation axis;

a first deflection pulley supported on said first end of said rotor, in such a way as to be capable of twisting together said plurality of wires in said twisting path, which extends from said first deflection pulley to said pair of crimping wheels;

a first flyer arm connected to said first rotor end an a second flyer arm connected to said second rotor end, said first and second flyer arm being capable of guiding the twisted wires about said cradle from said first rotor end to said second rotor end;

a second deflection pulley supported on said second end of said rotor, in such a way as to be capable of guiding said twisted wires coming from said second flyer arm axially out of said second rotor end; and

a pulling means for pulling said twisted wires out of said second rotor end.